CLAIMS:

1.A ballast device, comprising:

    a power supply unit for receiving an electrical source, said power supply unit has an assistant power circuit for generating outer working voltage, and a transformer for transiting the voltage that inputted it;

    a micro control unit, which directly uses said outer working voltage and generates a predefined load current; and

    a PWM control unit, which uses a PID control module to calculate said predefined load current and the load module's practical load current, and makes said transformer change it's output voltage by the calculate result.

2.The ballast device as claimed in claim 1, wherein said transformer is a DC-DC transformer, which can step down the voltage that inputted it.

3.The ballast device as claimed in claim 1, wherein said ballast has a user interface, by which a user can predefine said predefined load current.

4.The ballast device as claimed in claim 2, wherein said power supply unit further comprises an EMI filter for filtering EMI in the electrical source; a PFC for transiting the AC transmitted by said filter to DC, and outputting said DC power to said assistant power circuit and said DC-DC transformer respectively.

5. The ballast device as claimed in claim 4, wherein said ballast device further comprises some detection modules for detecting the outer parameters except for said micro control unit's parameters, and offer said outer parameters to said micro control unit.

6. The ballast device as claimed in claim 5, wherein said micro control unit further refer at least one outer parameter, said out parameters comprising said load module's practical load current to generate said predefined load current.

7. The ballast device as claimed in claim 6, wherein said micro control unit further judges whether the outer parameters are in the range of said micro control unit predefined to decide whether to generate a identifiable message.

8. The ballast device as claimed in claim 7, wherein said micro control unit further judges whether the outer parameters are in the range of said micro control unit predefined to decide whether to control said units except for said micro control unit.

9. The ballast device as claimed in claim 8, wherein said outer parameters further comprise said load module temperature, the output voltage of said DC-DC voltage transformer or the output voltage of said PFC.

10. The ballast device as claimed in claim 9, wherein said ballast device further comprises a DC-AC transformer, which connects with said micro control unit, wherein said micro control unit's electric connection can generate an invert wave to control DC-AC transformer according to user's demand.

11. The ballast device as claimed in claim 1, wherein said assistant power circuit of said power supply unit further generates an interior working voltage to supply said units except for said micro control unit.

12. A ballast method, comprising thereinafter process:

activating a power supply unit for receiving an electrical source, and generating an outer working voltage by an assistant power circuit;

transiting the input voltage of a transformer in said power supply unit;

generating a predefined load current with said outer working voltage by a micro control unit;

calculating said predefined load current and said practical load current by a PID control module; and

making said transformer change it's output voltage by the result of calculation.

13. The ballast method as claimed in claim 12, wherein said transformer is a DC-DC transformer, which can step down the voltage that inputted it.

14. The ballast method as claimed in claim 12, wherein said power supply unit further comprises an EMI Filter for filtering EMI in the electrical source; a PFC for transiting the AC transmitted by said filter to DC, and outputting said DC to the said assistant power circuit and DC-DC transformer respectively.

15 The ballast method as claimed in claim 12, wherein said ballast method further comprising: a user can predefine said predefined load current in the micro control unit by a user Interface.

16 The ballast method as claimed in claim 14, wherein said ballast method further comprising: detecting at least one outer parameter except for said micro control unit's for said micro control unit's reference.

17 The ballast method as claimed in claim 16, wherein said ballast method further comprising: said micro control unit generates said load current when the outer parameters that said micro control unit referred comprising said load module's practical load current.

18 The ballast method as claimed in claim 16, wherein said ballast method further comprising: further judging whether the outer parameters are in the range of said micro control unit predefined to decide whether to generate a identifiable message.

19. The ballast method as claimed in claim 18, wherein said ballast method further comprising: further judging whether said outer parameters are in the range of said micro control unit predefined to decide whether to control the units except for said micro control unit.

20. The ballast method as claimed in claim 19, wherein said outer parameter further comprises said load module temperature, the output voltage of said DC-DC voltage transformer or the output voltage of said PFC.

21. The ballast method as claimed in claim 12, wherein said ballast method further comprising: generating an inverter wave by said micro control unit to control said DC-AC transformer.

22. The ballast method as claimed in claim 12, wherein said ballast method further comprising: generating an interior working voltage to supply said units by an assistant power circuit of said power supply unit.

23. A ballast method, comprising thereinafter process:

receiving an electrical source and generating an outer working voltage by a power supply unit in the ballast device;

detecting the parameters about at least the power supply's and/or the load module's except for the micro control unit's;

receiving said outer working voltage and referring said outer parameters to generate a predefined load current by said micro control unit;

calculating said predefined load current and said load module's practical load current by a PID control module; and

changing said load module's practical active current real-timely by the result of calculation.

24. The ballast method as claimed in claim 23, wherein said ballast method further comprising: generating an invert wave by said micro control unit to control DC-AC transform.

25. The ballast method as claimed in claim 23, wherein said power supply unit further comprising: an EMI Filter for filtering EMI in the electrical source; a PFC for transforming AC sent by said filter to DC; an assistant power circuit for generating outer working voltage, and a DC-DC transformer for transforming the voltage controlled by said PID control module.

26. The ballast method as claimed in claim 25, wherein said outer parameter

further comprises said load module's temperature, the output voltage of said DC-DC voltage transformer or the output voltage of said PFC.

27. The ballast method as claimed in claim 26, wherein said ballast method further comprising: said micro control unit generates said load current when the outer parameters that said micro control unit referred comprising said load module's practical load current.

28. The ballast method as claimed in claim 27, wherein said ballast method further comprising: said micro control unit further judges whether the outer parameters are in the range of said micro control unit predefined to decide whether to generate a identifiable message.

29. The ballast method as claimed in claim 28, wherein said ballast method further comprising: said micro control unit further judges whether the outer parameters are in the range of said micro control unit predefined to decide whether to control the units except for said micro control unit.